

## SUMMARY

### Pharmacists, Pharmaceuticals, and Policy Issues Shaping the Work Force in Pharmacy<sup>\*†</sup>

Henri R. Manasse Jr., PhD, ScD,<sup>a</sup> and Marilyn K. Speedie, PhD<sup>b</sup>

<sup>a</sup>Executive Vice President and Chief Executive Officer, American Society of Health-System Pharmacists, Bethesda, MD

<sup>b</sup>Dean, College of Pharmacy, University of Minnesota, Minneapolis

The leaders of major national health professions education and practice organizations recommended ways to increase the capacity of the nation's health work force during an Association of Academic Health Centers (AAHC)-sponsored event on public policy and the health work force. Representing pharmacy, dentistry and dental hygiene, nursing, medicine, allied health, and public health, association leaders and policy experts identified barriers to increasing the capacity as well as avenues for change and improvement in policymaking related to the work force. The policy agendas highlighted the piecemeal approach to policymaking and the need for strategic national direction. AAHC is addressing the implications of the health work-force crisis and assessing options to develop and protect the nation's health work force. Pharmacists, pharmaceuticals, and policy issues affecting the pharmacy work force were addressed in a paper presented during the AAHC meeting on November 8, 2006.

It was noted that patients today are taking a record number of prescription medications. In 2003, 3.4 billion prescriptions were filled in the United States. Because census projections indicate that the elderly will make up at least 20% of the U.S. population by the year 2010, it is likely that prescription drug use will continue to increase. Nonprescription drug therapy is also increasing. Retail sales of nonprescription drugs approximately tripled between 1982 and 2002. In the United States, there are approximately 100,000 nonprescription products on the market. These drugs are gaining in popularity because of high consumer confidence that the products are safe

and effective when used according to the directions on the products' labels.

Women and the elderly consume the greatest amounts of nonprescription medications, likely because more women than men suffer from minor illnesses that can be self-treated. Statistics show that people over 65 years of age purchase 40% of all nonprescription drugs, even though they comprise less than 13% of the U.S. population. Medications account for a significant amount of U.S. health care spending. In 2002, prescription drugs represented the third highest type of health care expenditure in the United States. Because of the passage of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, an estimated 7 to 15 million Americans who had no prescription drug coverage became eligible for those benefits. Retail pharmacies are expected to see a significant increase in prescription volume as a result of Medicare Part D. Because of the growth in the use of prescription and nonprescription drugs, there will be a corresponding increase in workload for the pharmacy work force.

The morbidity and mortality associated with medication use were also discussed. Most drugs with Food and Drug Administration (FDA)-approved labeling do deliver the promised therapeutic effect in patients. However, adverse effects do affect some patients, with the severity ranging from the mild to the severe to, at times, death. The causes of these adverse reactions are difficult to ascertain. Errors in prescribing, dosing, management, distribution, and other factors in the prescription of medications contribute to the suffering and expense of patients and those involved in the process. Even correctly used medications can cause various forms of drug-induced diseases.

Costs associated with medication misadventures are enormous. The figure of \$177.4 billion was given for the overall cost of drug-related morbidity and mortality in the United States. Mortality caused by drug-induced diseases is a major concern for health care providers. The role of FDA in its approval process and postmarketing

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**Corresponding Author:** Henri R. Manasse Jr., PhD, ScD.  
American Society of Health-System Pharmacists,  
7272 Wisconsin Avenue, Bethesda, MD 20814  
E-mail: evp@ashp.org

\*Partially funded by the Josiah Macy Jr. Foundation.

†Commissioned paper by the Association of Academic Health Centers (AAHC) Workforce Initiative, presented at the AAHC meeting, The Policy Agenda to Expand the Workforce, Washington, DC, November 8, 2006.

surveillance systems was discussed. It is noted that no single agency is charged with the collection and analysis of data from postmarketing surveillance activities. It is felt that one single coordinated surveillance system is needed to analyze and compile such data.

Pharmacy, as the health discipline with practitioners specifically trained and educated in the chemical properties and clinical implications of drug therapy, can play an important role in modern health care, which is growing ever more reliant on biological and pharmaceutical products for patient care.

It is pointed out that the U.S. health care enterprise needs a pharmacy work force that possesses sufficient personnel, training, and organizational, technological, and financial resources to protect the public against preventable injury and mortality that can stem from medication use. A review is presented that assesses the degree to which the U.S. federal and state policy currently aids in the development and maintenance of this work force and how such policy might be improved in the future.

As the practice of pharmacy has evolved, the legislative declaration of the scope of practice of pharmacy has also evolved through a combination of federal and state legislative actions. By 1998, states had codified various pharmaceutical services such as interpreting and evaluating prescriptions, compounding, consultation, and drug administration, among others. On the federal level, an act was passed that required pharmacist review of a patient's prescriptions and the counseling of patients.

Pharmacy's preferred future is addressed. The Joint Commission of Pharmacy Practitioners developed a document that details the preferred future for pharmacy to be attained by 2015. The vision document sets forth that pharmacists will communicate and collaborate with patients, caregivers, health care professionals, and qualified support personnel.

Issues affecting pharmacy's work force include education and training at the doctor of pharmacy level; postgraduate education and training (graduate degrees and residencies); the implications of a substantial shift in the sex of pharmacy practitioners; and financing implications for undergraduate, graduate, and residency education and their effect on current and anticipated work-force shortages. Short-term responses to the work-force shortage are discussed.

The demographics of the current work force in the United States, including age distribution, racial and ethnic diversity, rural and urban distribution, and practice setting are elucidated.

The changes in the practice of pharmacy, combined with an aging society with chronic diseases and newly approved medications, result in the need for a significantly expanded pharmacist work force with appropriate education and training.

**This summary was published in the June 15, 2007, issue of the *American Journal of Health-System Pharmacy* and the complete article appears in the online version of that issue at <http://www.ajhp.org>.**